

FORMAL ASSESSMENT

The Oil Spill – The Rest of the Story

Each activity in the Estuaries 101 Middle School Curriculum is designed around specific performance tasks. A generalized set of scoring rubrics is provided to judge student progress against these performance tasks. Use the performance assessment indicators in the table below along with the suggested answers in the Teacher Guide to arrive at a score for each performance task.

In addition, you can use the attached Student Assessment handout to conduct a formal assessment at the conclusion of the activity. Use the suggested answers and performance assessment indicators to rate each student's progress.

Performance Tasks	Performance Assessment Indicators		
	Low - Basic	Medium - Proficient	High- Advanced
The student can list several types of land cover typically found in a watershed.	The response is partially correct. There is also evidence of inaccurate, incomplete, or inappropriate skills or knowledge.	The response is correct, and demonstrates accurate understanding of concepts. Minor inaccuracies may appear but there is no evidence of misconceptions.	Evidence of higher-level thinking and the application of the appropriate skills and prior knowledge. The response is correct and complete, and contains elaboration and extension. There is no evidence of misconceptions. Minor inaccuracies should not necessarily lower the score.
The student can differentiate between “point source” pollution and “non-point source” pollution.			
The student can explain how changes in land use might affect the water quality in streams and rivers.			

Questions and Answers

1. The large body of water at the top of the image is Lake Erie. Circle the mouth of the Old Woman Creek estuary that opens on to Lake Erie.

2. List two types of natural land cover present in the Old Woman Creek watershed.

Possible answers include: meadows, wetlands, marshes, forests

3. List three types of man-made land uses found in the watershed.

Possible answers are: farms, crops, roads, towns, houses, etc.

4. List possible sources of non-point source pollution that could make its way to Old Woman Creek estuary.

Possible answers include: Farm runoff of fertilizer and animal waste, road runoff of salt, gas and oil, dumping of products from homes.

Reflection Question

Estuary pollution starts upstream in the watershed. Pick one of the two options to help clean-up pollution and describe how it can help the estuary:

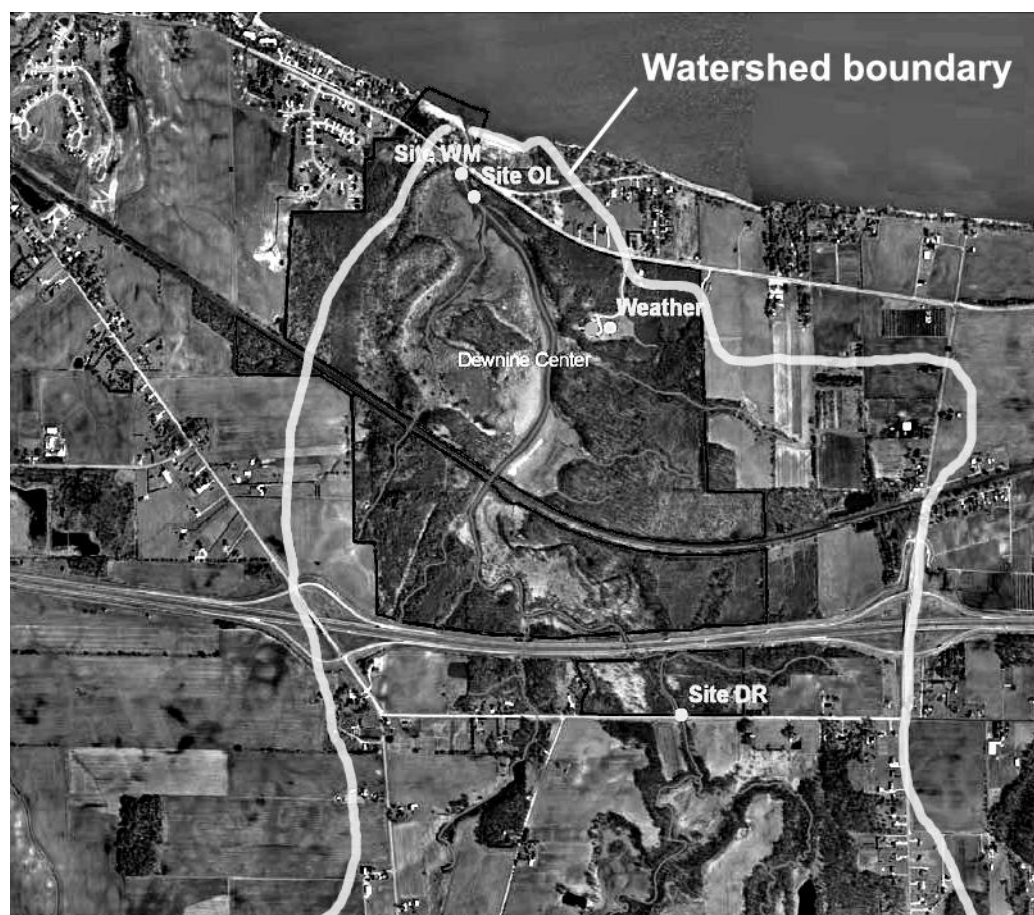
- If there is a leak in a gas can or lawnmower, have it fixed. Do not dump old oil into storm sewers. Do not flush prescriptions down the toilet.
- Make sure to pick up after pets and dispose of pet waste properly.

[Individual responses will vary]

STUDENT ASSESSMENT

The Oil Spill – The Rest of the Story

You learned that the 2010 oil spill in the Gulf of Mexico is an example of point source pollution. There is another form of pollution from non-point sources that comes from runoff into the watershed. Your challenge is to identify possible non-point sources of pollution in the Old Woman Creek estuary in Ohio. Examine the image below.



1. The large body of water at the top of the image is Lake Erie. Circle the mouth of the Old Woman Creek estuary that opens on to Lake Erie.
2. List two types of natural land cover present in the Old Woman Creek watershed.
3. List three types of man-made land uses found in the watershed.
4. List possible sources of non-point source pollution that could make its way to Old Woman Creek estuary.

Reflection Question

Estuary pollution starts upstream in the watershed. Pick one of the two options to help clean-up pollution and describe how it can help the estuary:

- Properly dispose of oil and house hold chemicals; or
- Control animal waste